

# PATENT COOPERATION TREATY


## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| REC'D 03 JAN 2006 |
| WIPO PCT          |

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|---|--|--|
| Applicant's or agent's file reference<br>41575-373  | <b>FOR FURTHER ACTION</b><br>See Form PCT/IPEA/416                   |  |
| International application No.<br>PCT/US2005/002298  | International filing date (day/month/year)<br>25.01.2005             | Priority date (day/month/year)<br>06.02.2004 |
| International Patent Classification (IPC) or national classification and IPC<br>F16H1/28  |  |  |
| Applicant<br>L & P PROPERTY MANAGEMENT COMPANY et al.   |  |  |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 9 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> |  |  |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>  |  |  |
| Date of submission of the demand<br><br>11.11.2005  | Date of completion of this report<br><br>29.12.2005                  |  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465   | Authorized Officer<br><br>Meyer, T<br><br>Telephone No. +49 89 2399- |  |



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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-14 as originally filed

**Claims, Numbers**

1-11 as originally filed

**Drawings, Sheets**

1/6-6/6 received on 25.04.2005 with letter of 17.03.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 5-11

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 5-11

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

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**Box No. IV Lack of unity of invention**

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1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
  - ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☒ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
  - ☒ not complied with for the following reasons:  
**see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-4 .

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims |     |
|                               | No: Claims  | 1-5 |
| Inventive step (IS)           | Yes: Claims |     |
|                               | No: Claims  | 1-5 |
| Industrial applicability (IA) | Yes: Claims | 1-5 |
|                               | No: Claims  |     |

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rule 70.10)  
and /or
2. Non-written disclosures (Rule 70.9)  
**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**State of the Art:**

During the procedure, reference is made to the following documents:

- D1: DE 44 12 898 A1 (ORLOWSKI, BERNHARD, DIPL.-ING., 70176 STUTTGART, DE) 19 October 1995 (1995-10-19)
- D2: DE 103 14 771 A1 (ROBERT BOSCH GMBH) 14 October 2004 (2004-10-14)
- D3: US-A-4 918 344 (CHIKAMORI ET AL) 17 April 1990 (1990-04-17)
- D4: US-A-4 050 331 (BRAREN ET AL) 27 September 1977 (1977-09-27)
- D5: WO 01/48397 A (DIRO GMBH & CO. KG; TOMCZYK, HUBERT) 5 July 2001 (2001-07-05)
- D6: DE 299 05 163 U1 (ASEC GMBH, 51702 BERGNEUSTADT, DE) 1 July 1999 (1999-07-01)
- D7: US-A-5 429 558 (LAGARDE ET AL) 4 July 1995 (1995-07-04)

Regarding D3, see "ad Re VI." below.

**Ad Re IV.:**

1. The application relates to a plurality of inventions or groups of inventions, in the sense of Rule 13.1 PCT, in particular the claims form three separate groups of subject-matter/inventions:
  - 1.1. Claims 1 to 5 relating to  
a hollow axle motor assembly comprising substantially an electric motor and a hollow axle, wherein said axle drives a planetary gearing which drives an inner output shaft.
  - 1.2. Claims 6 to 10 relating to  
a track drive mechanism comprising inter alia a hollow axle motor assembly comprising substantially an electric motor and a hollow axle, wherein said axle drives two tracks and a housing of the electric motor drives unlocking mechanisms for said tracks.
  - 1.3. Claim 11 relating substantially  
a seat comprising substantially a seat bottom, a seat back and an a hollow axle motor assembly comprising substantially an electric motor, a hollow axle and a housing,

wherein the axle drives the seat bottom, said housing drives said seat back.

1.4. The common among claims 1, 6 and 11 is thus substantially represented by the features

"a hollow axle motor assembly comprising substantially  
an electric motor and a hollow axle".

Said concept is however not novel, see for example document **D3** or **D1** (see § ad re V.  
below).

1.5. If the applicant pays additional fees for the two not yet searched groups of inventions, then the further searches may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within the not yet searched groups. In such a case only the first invention in these groups of inventions, which is considered to lack unity of invention, will be the subject of a search. No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

**Ad Re Item V.:**

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1, which is considered to represent the most relevant prior art, discloses in the embodiment of Fig. 3

a hollow axle motor assembly comprising substantially

- electric motor 3, 4
- hollow shaft 27
- first gear 28
- planetary gear drive assembly 20, 21, 28

- drive shaft 26
- drive shaft mount 26, 21.

Thus the present wording of claim 1 is so broad, that D1 completely covers its scope.

2. Important note regarding inventive step (Art. 33(1) PCT):

2.1. The assembly of D3 differs from the assembly of claim 1 only in that rollers instead of "gears" are used. However it would be per se obvious to the skilled person to replace the rollers of D3 by common gears while maintaining the general structure.

2.2 It is noted that the very general idea to use a hollow ring gear of a planetary gear stage as input is of course already known, see for example D4, column 6, lines 14ff.

Thus in particular D3 and D4 must be taken into consideration regarding inventive step in any future procedural step.

3. The dependent claims 2 to 4 define very general details which are also known by at least D1. See for example items 1 and 2 of D1 for the "cover" of claim 3, or see the "Aggregat" according to column 3, line 5 of D1 for claim 4. The diameter of shaft 26 is of course smaller than that of shaft 27, cf. claim 5 of the application.

**Ad Re VI.:**

1. The document D2 indicated in the search report as a P-document is not to be regarded as state of the art, as the date of priority claimed can be allowed for the relevant parts of the present application.

**Ad Re VII.:**

1. It is at present not apparent which part of the application could serve as a basis for a new, allowable claim. Should the applicant nevertheless regard some particular matter as patentable an independent claim including such matter should be filed. The applicant should also indicate in the letter of reply the difference of the subject-matter of the new claim vis-à-vis the state of the art and the significance thereof.



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(SEPARATE SHEET)**

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2. To meet the requirements of Rule 6.3(b) PCT the independent claim should be properly cast in the two part form, with those features which in combination are part of the prior art (see document D1) being placed in the preamble.

D1 should be identified as the document disclosing the features according to the preamble of independent claim 1.

3. The description must be brought into conformity with any fresh claims (Rule 5.1. a) PCT). Particular care must be taken that if all statements relating to embodiments which will be no longer included in the claims are deleted.

4. Particular care should however be taken during revision of the whole application, and especially of the introductory portion of the description including any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed.

In order to facilitate the examination of the conformity of the amended application the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the original application as filed on which these amendments are based (Art. 34(2)b) PCT).

In view of procedural transparency and efficiency these indications could be submitted in handwritten form on an additional copy at least of the relevant parts of the application as filed (for illustration of the principle cf. "a ~~means~~ *spring*", "a ~~means~~ spring" or "a spring"). If handwritten amendments only are submitted, they should be clearly legible for the printer.

5. In addition to written communications, during the entire examination procedure the examiner is prepared to deal with matters (which are not too extensive) by telephone, cf. the telephone number on the cover sheet of this communication.